Quality Control

∾Work Order ID 92075

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92075

Page 1

Item ID: 647.1814 Accept *N900040100* Setup Start **Revision ID:** Item Name: Gusset LH **Start Date:** 22/10/2012 Start Oty: 6.00 Cust Item ID: **Required Date:** 05/11/2012 Req'd Qty: 6.00 **Customer:** Reference: Run Start **Approvals:** Process Plan: ML5 Date: 12-10-22Tooling: Date: Stop QC: _____ Date: ____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Reject Tool # Plan Accept Reject Insp. Work Center ID Description Qty **Run Hours** Code **Qty** Number Stamp Draw Nbr **Revision Nbr** 647.7300 N/C 110 0.00 *110* Waterjet Memo 0.00 FLOW CNC Waterjet 1-Cut as per Dwg Dwg Rev: //C Prog Rev: /// 2024.040 2-Deburr if necessary 120 QC2- Inspect parts off machine FAI/FAIB 0.00 *120* JM12-11-1 0.00 Memo

										DQA:	Date:	
NCR:	Yes / No				WORK ORDER NON-O	100	NFORM	MANCE / UPDATE		•		<i>y</i> .**
								·		QA Closed:	Date:	
Work Orde	ar.				DISPOSITION			AGAII	NST DE	PARTMENT	/PROCESS	
WOIN OIG					Rework	1		Skid-tube Crosst	uhe	1	Water Jet	Engineering
Part N	No.				Scrap	1] ;	Machining Small	<u> </u>	Pro	d. Eng. Coor.	Quality
					Use-as-is	1		noforming Finish	<u> </u>	4	re/Packaging	Other
NCR I	No.				Work Order Update	1		Large Fab Compo		1	Supplier	1 1
						_				-		-
Root				Descri	ption of work order update		Initial	Action		Sign &		
Cause	Date	Step	Qty	l	or Non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data			\									
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Operator		1										
Material											1	
Setup		ļ										
Other		1										
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Training			'									
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Landi	ng Gear				General		_			_		
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	Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
,	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	ct	Weld
	Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/Unclear		Part Lost/Mi	issing	Wrong Stock Pulled
	Cuffs				Contamination	[]	Mainte	nance		Part Moved		-
	Heat Trea	at			Countersink		l Mislahe	led		Positioned V	Mrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

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92075

Work Order ID 92075

October-22-12 3:19:07 PM Item ID: 647.1814 Accept *N900040100* Setup Start **Revision ID:** Item Name: Gusset LH Start Date: Start Oty: 6.00 22/10/2012 Cust Item ID: **Required Date:** 05/11/2012 Req'd Otv: 6.00 **Customer:** Reference: Run Start Process Plan: Date: Tooling: Approvals: Date: Stop Date: SPC (Y/N): Date: Sequence ID/ Operation Tool ID Set Up/ Tool # Plan Reject Accept Reject Insp. Work Center ID Description **Run Hours** Code Oty Otv Number Stamp 130 QC8- Inspect parts - second check 0.00 *130* 6 OC. Memo **Quality Control** 121101 140 Form as per dwg 0.00 *140* Brake NC Memo 0.00 Brake NC

150

QC5- Inspect part completeness to step on W/O

150 QC

Quality Control

Memo

NCR:	Yes	/ No				WORK ORDER NON-O	COI	NFORI	MANCE / UPI	DATE			
						·			•		QA Closed:	Date:	
Work Ord	er:					DISPOSITION			,				
Part I	,	,				Rework Scrap Use-as-is Work Order Update		1	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root			I		Doscri	ption of work order update	Г	Initial	Act	ion	Cian 0	-	
Cause		Date	Step	Qty		or Non-conformance		nief Eng		iption	Sign & Date	Verification	QC Inspector
Doc/Data	Г	Dute	Step	Q.,	`	or reon comormance	-	iici Liig	Descr	iption .	Date	verification	QC ITSPECTOR
Equip/Tooling			ļ										
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Landi					·	General		1			1		1
	\vdash	Bending				Bend	<u> </u>	Grain			Ovalized		Pressure/Forced
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	-		^rimmad		-	Broken/Damaged	-	1	on Incomplete	—	Part Incorred		Weld
	-	Crushed/(Cuffs	urimpea,		-	Burrs	-	1	ions Incomplete/U	Inclear	Part Lost/Mi	ssing	Wrong Stock Pulled
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	${oldsymbol{ o}}$	Ripples in	•	·ube	\vdash	Drill Holes	\vdash	Offset		L	Jeower Loss/	ourge	Other
	Н	Torque W		xtrusion	, 	Drawing		1	Calibration				
	-	Turning Se				Finish	H	1					
	Ш	Turning Se	equence			Finish		Out of S	equence				

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

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92075

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Item ID: 647.1814 Accept *N900040100* Setup Start **Revision ID:** Item Name: Gusset LH **Start Date:** 22/10/2012 Start Qty: 6.00 **Cust Item ID: Required Date:** 05/11/2012 Req'd Qty: 6.00 **Customer:** Reference: Run Process Plan: ____ Date: ____ Tooling: Approvals: Date: Date: _____ SPC (Y/N): Date:__ Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. Work Center ID **Description Run Hours** Qty Code Qty Number Stamp 160 Outsource process-Anodize per QSI017 4.1.10.1 0.00 *160* Outsource4 0.00 Memo Outsource process - Anodize ISSUE P/O: HARD ANODIZE, COLOR BLACK AS PER DWG.(SEE NOTE 2) 170 Receive & Inspect for Damage & Mat'l Certs 0.00 *170* Packaging 0.00 Memo Packaging 180 QC5- Inspect part completeness to step on W/O *120* QC Memo Quality Control

NCR:	Yes	/	No

WORK ORDER NON-CONFORMANCE / UPDATE

	DQA: QA Closed:	Date:	
DEI	PARTMENT	/PROCESS	
		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
	Sign & Date	Verification	QC Inspector

											QA Closed:	Date	e:	
Work Orde	-r·					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	·	
Part N	_					Rework Scrap Use-as-is		Skid-tube Crosstube Machining Small Fall Thermoforming Finishing			4	Water Jet d. Eng. Coor.	Engineering Quality Other	
NCR N	No					Work Order Update	1		Large Fab	Finishing Composite	Rec/Store/Packaging Othe Supplier			
Root					Descri	ption of work order update	lı	nitial	Ad	ction	Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Chi	ef Eng	Desc	cription	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved		•												
	L1		1	<u> </u>	,	. F	AUL	T CATE	GORY		· I	I		
Landi	ng G	ear				General								
		Bending Centre No Cracks Crushed/G Cuffs Heat Trea Inspection	Crimped. at n Strip in		o/s	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes			ion Incomplete ions Incomplete enance eled	/Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned N Power Loss/	ct issing Wrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
		Torque W	aves in E	xtrusio	n 🗀	Drawing		Out of (Calibration					
		Turning S Wave/Tw				Finish Folio	-		Sequence Dimensions					

210

Identify as per dwg & Stock Location: 1350

210 Packaging

Memo

0.00

Packaging

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

												DQA:	Date:	
NCR:	Yes	/ No					WORK ORDER NON-C	DER NON-CONFORMANCE / UPDATE						
						_						QA Closed:	Date:	
Vork Ord	er:						DISPOSITION			AGAINST	r DEP	ARTMENT	PROCESS	
							Rework	}		Skid-tube Crosstube			Water Jet	Engineering
Part	No.						Scrap		1	Machining Small Fat	-	Pro	d. Eng. Coor.	Quality
							Use-as-is		Thern	noforming Finishing		Rec/Stor	e/Packaging	Other
NCR	No.						Work Order Update			Large Fab Composite			Supplier	J
Root					Desc	crip	ntion of work order update		nitial	Action		Sign &		
Cause		Date	Step	Qty		C	r Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
oc/Data	<u>_</u>													
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upplier raining	-													
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napproved	1		L	i	<u> </u>		F		T CATE	GORY	1			.1.
Land	ing (Gear			·····		General							
		Bending			ſ		Bend		Grain			Ovalized		Pressure/Forced
		Centre No	t Concer	ntric to (o/s		BOM/Route		Hardwa	re	П	Over/Under	tolerance	Temperature/Cure
		Cracks					Broken/Damaged		Inspect	on Incomplete		Part Incorred	et 📗	Weld
		Crushed/0	Crimped.				Burrs		Instruct	ions Incomplete/Unclear	П	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs					Contamination		Mainte	nance		Part Moved		_
		Heat Trea	t				Countersink		Mislabe	led		Positioned V	Vrong	_
		Inspection	n Strip in	Tube			Cut Too Short		Misread	I		Power Loss/	Surge	Other
		Ripples in	Bend				Drill Holes		Offset					
		Torque W	aves in E	xtrusio	า [Drawing		Out of (Calibration				
		Turning So	equence				Finish		Out of 9	Sequence				

Outside Dimensions

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Wave/Twist in Tube

October-22-12 3:19:07 PM 647.1814 Item ID: Accept *N900040100* Setup Start **Revision ID:** Item Name: Gusset LH **Start Date:** 22/10/2012 Start Qty: 6.00 Cust Item ID: **Required Date:** 05/11/2012 Req'd Qty: 6.00 **Customer:** Reference: Run Process Plan: Approvals: Date: Tooling: Date: Stop SPC (Y/N): Date: Date: Sequence ID/ Operation Set Up/ Tool # Plan Tool ID Reject Reject Accept Insp. **Work Center ID Description** Run Hours Code Qty Qty Number 220 QC21- Final Inspection - Work Order Release 0.00 0.00 Memo Quality Control

												DQA:	Date:	
NCR:	Yes	/ No					WORK ORDER NON-C	COI	NFORM	/ANCE / UPI	DATE	04.61	Data	» *
						-						QA Closed:	Date:	
Vork Ord	er:						DISPOSITION				AGAINST DE	PARTMENT	PROCESS	·
Part							Rework Scrap		יז	Skid-tube Aachining	Crosstube Small Fab	4	Water Jet d. Eng. Coor.	Engineering Quality
NCR	No.						Use-as-is Work Order Update			oforming Large Fab	Finishing Composite	Rec/Stor	re/Packaging Supplier	Other
Root		_			Des		otion of work order update	1	nitial		tion	Sign &		
Cause	1	Date	Step	Qty			or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector
oc/Data quip/Tooling perator laterial etup ther rocess upplier raining napproved											·			
							F.	AUL	T CATE	GORY				
Landi	ng (Gear					General		-			-		_
		Bending Centre No	ot Concer	ntric to (o/s		Bend BOM/Route		Grain Hardwa			Ovalized Over/Under	 	Pressure/Forced Temperature/Cure
	_	Cracks				<u> </u>	Broken/Damaged	\vdash	1	on Incomplete		Part Incorred		Weld
	<u> </u>	Crushed/0	Crimped.			<u> </u>	Burrs	\vdash	4	ions Incomplete/I	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
•		Cuffs				<u> </u>	Contamination	\vdash	Mainte		·	Part Moved		
	_	Heat Trea	-			<u> </u>	Countersink		Mislabe		ļ	Positioned V		7
	<u> </u>	Inspection	•	Tube		<u> </u>	Cut Too Short	_	Misread			Power Loss/	Surge	Other
	<u> </u>	Ripples in				_	Drill Holes		Offset					
	$ldsymbol{ldsymbol{ldsymbol{ldsymbol{eta}}}$	Torque W	aves in E	xtrusion	ו		Drawing	\perp	Out of C	Calibration				
	1	Turning So	equence				Finish	1	Out of S	equence				

Outside Dimensions

Wave/Twist in Tube

Picklist Print

~October-22-12 3:19:11 PM

Work Order ID: 92075

Parent Item:

647.1814

Parent Item Name: Gusset LH

92075 *647 1814*

Start Date: 22/10/2012

Required Date: 05/11/2012

Start Qty: 6.00

Required Qty: 6.00

Comments:

IPP REV:A 12.10.03 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.040 *M2024T3 .040 sheet		Purchased	No			110	sf	217.4512	0.085	9. 53684 2 6.6			JM1211-1
2024-13 .040 sneet				Location		Loc C	<u>Otv</u>	Loc Code					

Location	Loc Qty	Loc Code	
MAT022	217.4511626		
120605	32.9127416		
121197	32.498421		
122136	22.39		122136
123217	129.65		- V - × - V

Page 1

						•						DQA:	Date	≥: .	
NCR:	Yes	/ No				WORK ORDER NON-C	O	VFORI	MANCE / UP	DATE					*
												QA Closed:	Date	5:	
Work Ord	er:					DISPOSITION				AGAINST	DE	PARTMENT	PROCESS		
Part NCR						Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		4	Water Jet d. Eng. Coor. e/Packaging Supplier		Engineering Quality Other
Root					Descr	iption of work order update		Initial	Act	tion		Sign &		T	
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription		Date	Verification	ļ	QC Inspector
Doc/Data														コ	
Equip/Tooling				1											
Operator															
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Setup															
Other															
Process														ĺ	
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Training			•												
Unapproved							1								
						F	AUL	T CATE	GORY					_	
Landi	ing (Gear				General									
		Bending				Bend		Grain		ſ		Ovalized	F	\neg	Pressure/Forced
		Centre No	t Concer	ntric to	o/s	BOM/Route		Hardwa	re	Ì		Over/Under	tolerance	ᅱ	Temperature/Cure
		Cracks				Broken/Damaged		1	on Incomplete			Part Incorred	 	ᅱ	Weld
		Crushed/0	Crimped.			Burrs		1	ions Incomplete/	Unclear		Part Lost/Mi	⊢	\dashv	Wrong Stock Pulled

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Part Moved

Positioned Wrong

Power Loss/Surge

Other

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

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Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

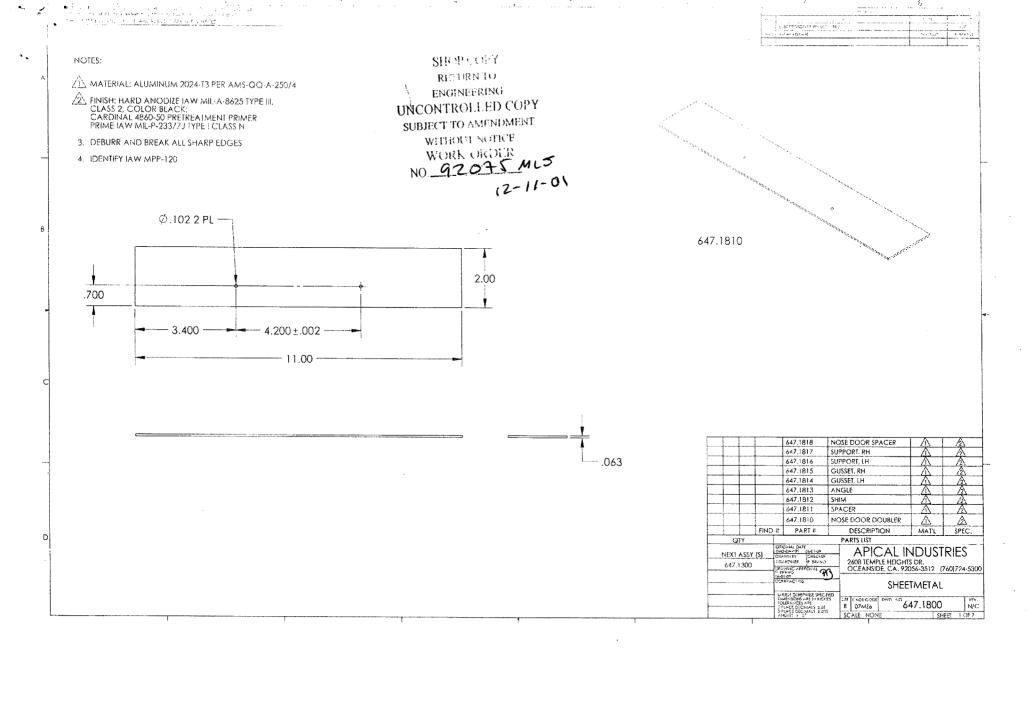
DART AEROSPACE LTD	Work Order:	92075
Description: Gusset LH	Part Number:	647.1814
Inspection Dwg: 647. 1800 Rev: N/C		Page 1 of 1

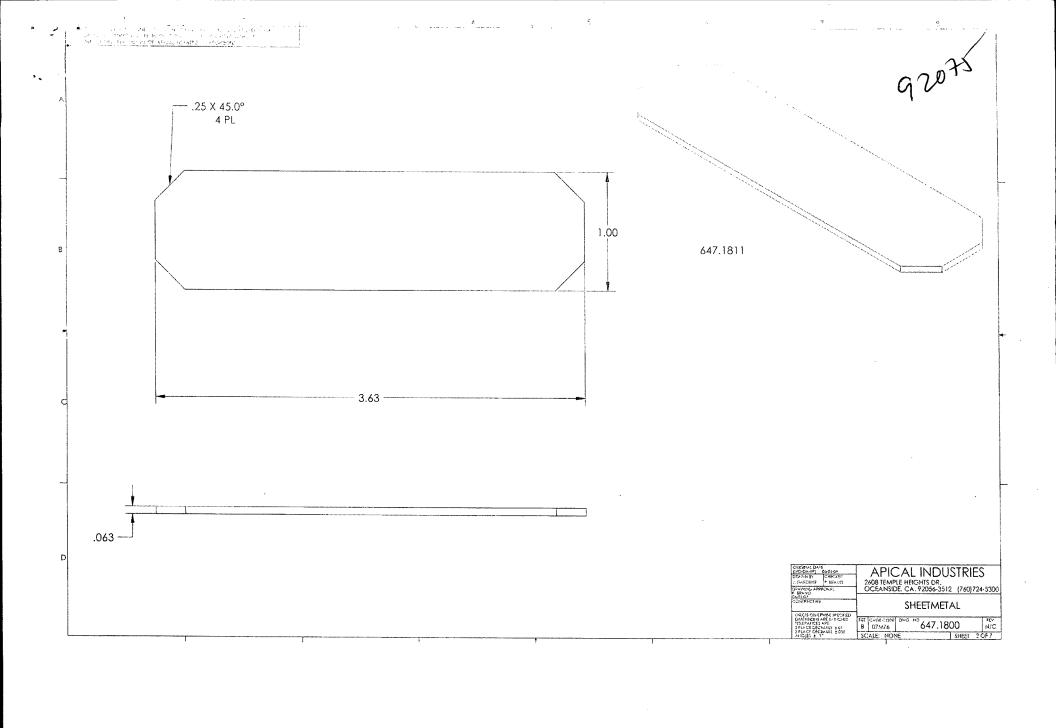
FIRST ARTICLE INSPECTION CHECKLIST

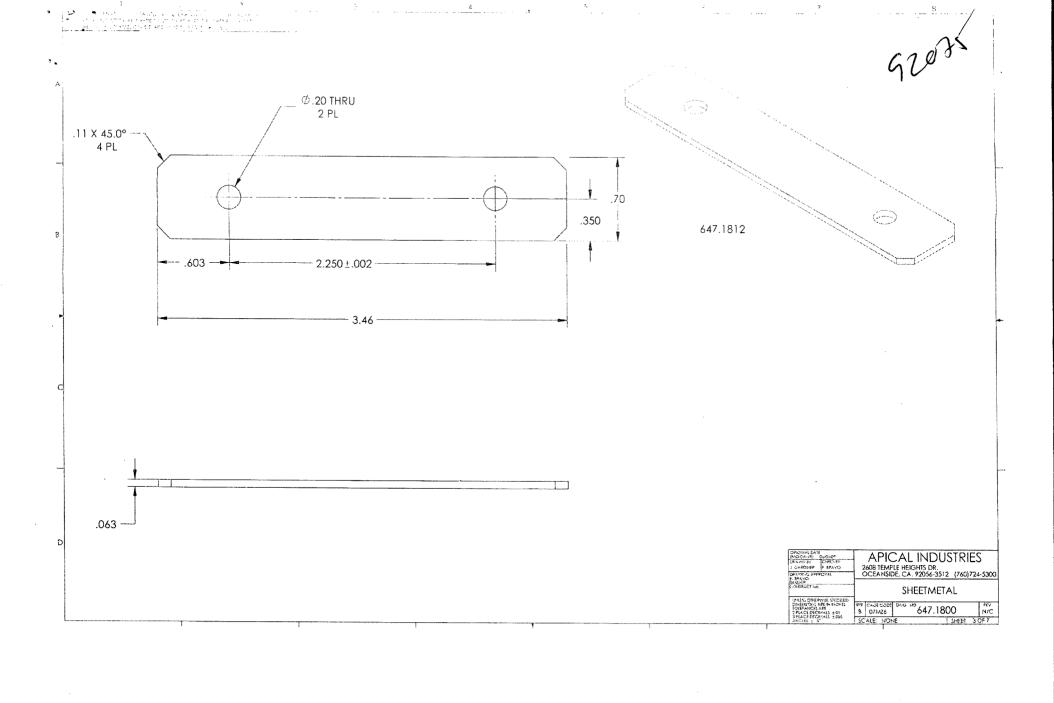
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
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0,50"	41-0,010"	0.50"	~		V	
1.55	11-0.010"	1,576"	_		V	·
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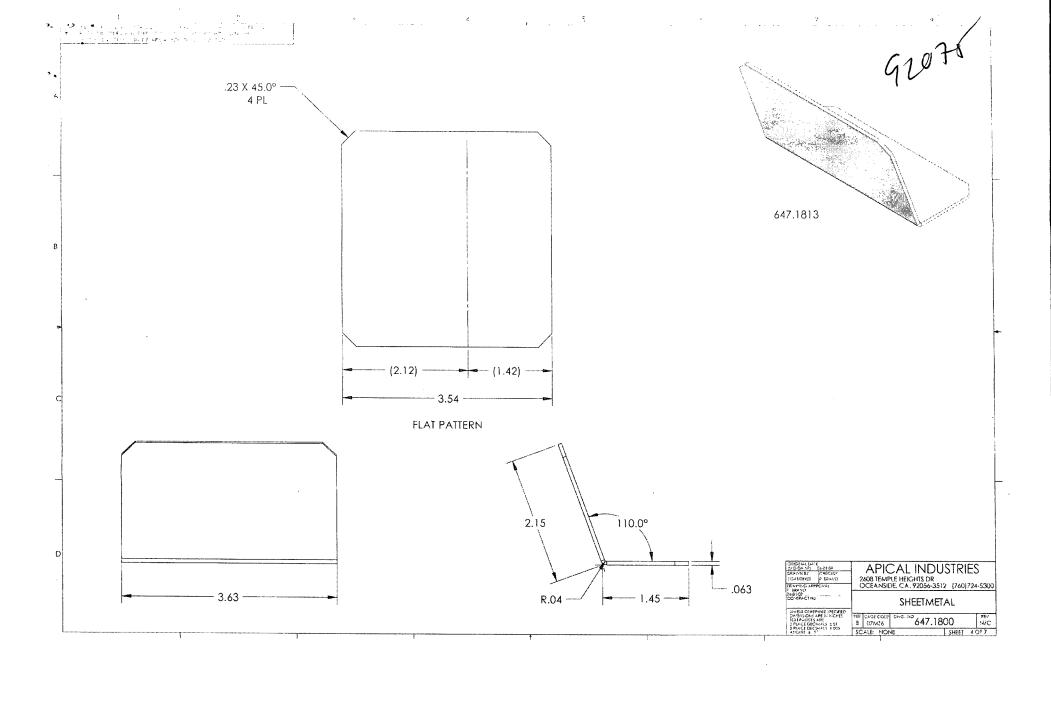
Measured by:	Jr.	Audited by:	(4.5)	Preliminary Approval:	
Date:	12-11-1	Date:	Q 11.0)	Date:	

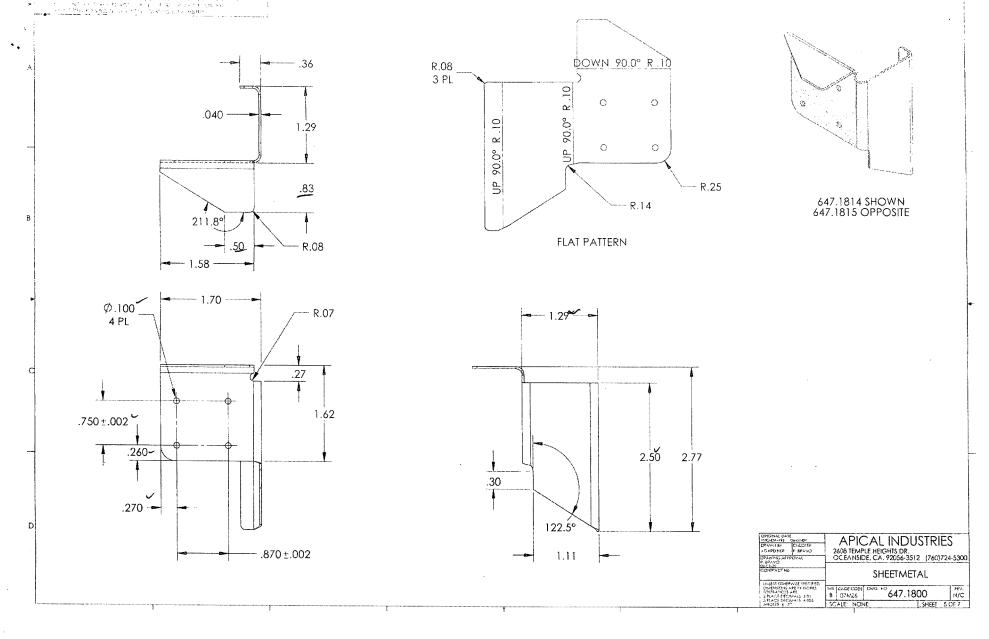
Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

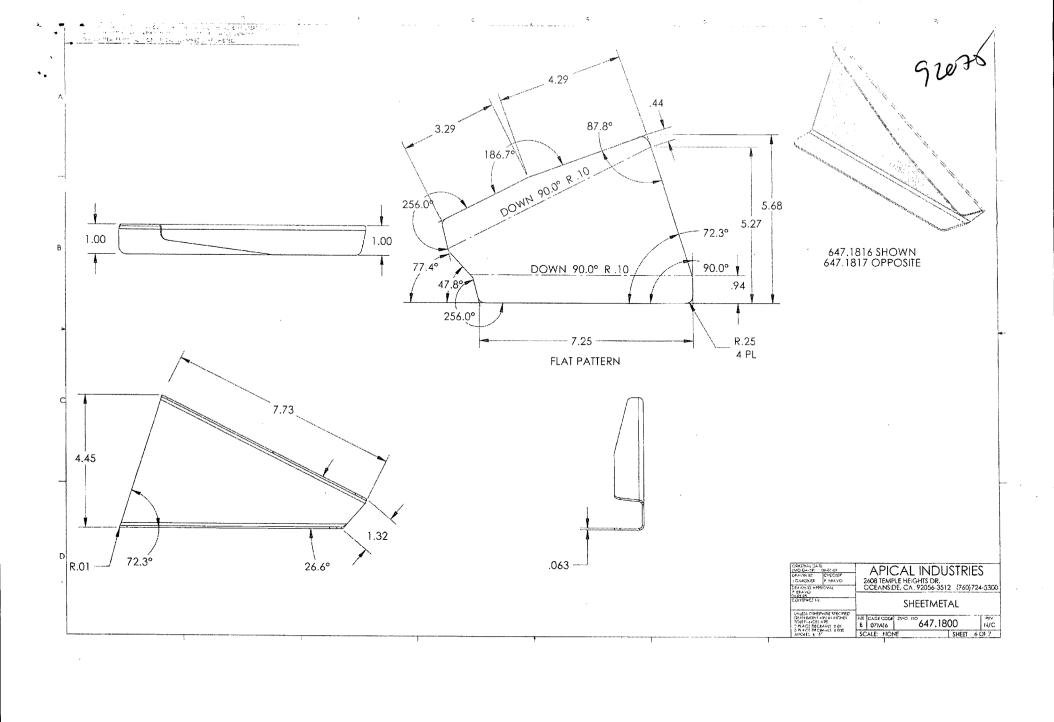


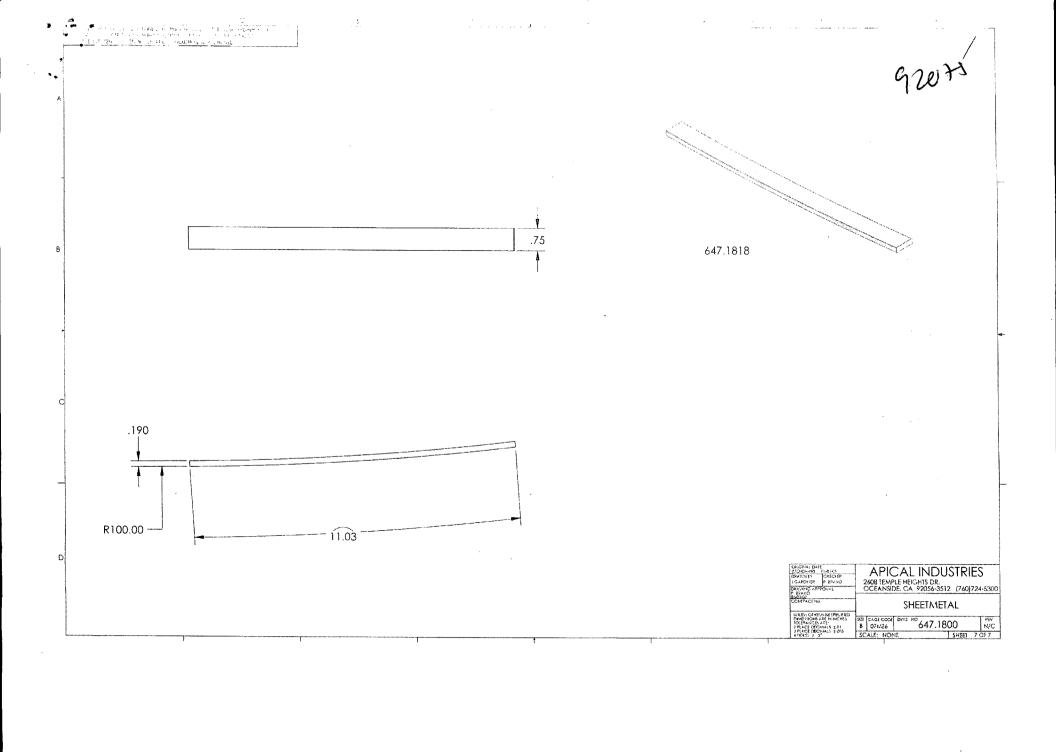














A.T.G. Industries Inc. 731, rue Industrielle Rd. PLATING DEPARTMENT Rockland, On K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4556

Pack List

Number: 62076

Date: 27-Nov-12

To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada **Ship To**

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via				
Quantity	Description					
1	Part: ASST		Rev:			
lot				•		
	4 PCS D4410-11 2 PCS 647.1612					
	14 PCS 647.1812					
	11 PCS 647.1613					
	1 PCS 647.1810 2 PCS-647.1811					
4	/8 PCS 647.1814)				•	
. (11 PCS 647:1815 10 PCS 646:3110					
	* *					
	HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2					
	Job: 20120737	PO: PO18399	Line:			
	Certificate of Co	nformance				
	A.T.G. Industries certifies that all items with all requirements, specifications an	s in this shipment are in cor id drawings referenced in th	tormance e purchase order.			
	ISO 9001 : 2008 RE					
	ATG SALES-2010 T	ERMS APPLY				
	DATE: 27/11/12					
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	CERTIFIED SIGNATURE:	V				
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